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**Manchester City Council  
Report for Resolution**

**Report to:** Economy Scrutiny Committee –11 December 2013

**Subject:** Smart Cities

**Report of:** Jessica Bowles, Head of City Policy

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**Summary**

The report sets out work undertaken and progress so far with regard the development of Smart Cities. It takes as its starting point the submission to the Technology Strategy Board (TSB) to become the UK Future Cities Demonstrator and subsequent work in developing a programme of work as well as the synergies with emerging work from the European Commission and UK government.

The smart city landscape is broad and complex in nature. Its implications are far reaching in the way we design and manage our cities in the future. A key challenge is the ability to implement at scale and whilst new European programmes are seeking to tackle this, the relationship between city authorities and technology providers needs to be addressed.

Notwithstanding these issues, Manchester is making progress in some areas. These include the work which TfGM is currently undertaking regarding the procurement of smarter travel options and the work by the authority itself on data collection to help underpin the public sector reform agenda.

**Recommendations**

For Members to note the report and endorse the next steps as set out in section 4.

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**Wards Affected:** All

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**Background documents (available for public inspection):**

The following documents disclose important facts on which the report is based and have been relied upon in preparing the report. Copies of the background documents are available up to 4 years after the date of the meeting. If you would like a copy please contact one of the contact officers above.

- Future City Manchester: Application to be the UK Demonstrator, November 2012.

## **1.0 Introduction**

1.1 Cities are real-time systems, but rarely run as such. In the past many have used Information and Communications Technology (ICT) to improve performance at a departmental level including mobility, utilities, community and eGovernment services. In these cities “smart technologies” are creating more efficient systems and better informed citizens. Now leading cities have started to push this concept further. They are exploring how smart cities can add value within a strategic framework. This will mean moving from departmental solutions to a city wide approach, creating economies of scale and scope that will result in:

- Economic development and the creation of jobs.
- Resource efficiency and mitigating climate change.
- A greater place to live and work.
- More efficient cities
- Supporting communities

Many of the outcomes generated from a ‘smart city ‘ approach align very closely and contribute towards our wider ambitions for Manchester and the priorities within the Community Strategy. The draft Vision set out in paragraph 3.4 of this report will be the critical link to achieving these synergies. However, this Vision will need to be underpinned by a more detailed ‘Road-Map’ that articulates an integrated approach between the way people, businesses and place interact with city infrastructure and services in a smart way.

## **2.0 Background**

2.1 In November 2012, the City Council submitted its proposal to the Technology Strategy Board to become the Future City Demonstrator for the UK. Whilst this award and the associated funding went to Glasgow, the council and its partners have continued to progress and begin the development of a programme of work whilst at the same time exploiting opportunities at both European and National level. This work has been overseen by a small but senior group chaired by the City Council’s Chief, and including the vice chancellors of the university of Manchester and Manchester Metropolitan University as well as TfGM and New Economy.

2.2 Focussed in the geographic area of Corridor Manchester the bid to TSB brought together a range of 24 projects in an integrated way. These projects were centred around 5 key themes; buildings, energy, transport, logistics and living. At the heart of this bid was the proposal to establish an open data platform incorporating an array of fixed and mobile sensors linked to a geospatial analytical engine. The purpose of the bid was to show how it was possible to deliver economic growth whilst achieving environmental targets and responding to societal change.

2.3 In mid-October the European Commission published its Smart Cities and Communities Strategic Implementation Plan (SIP). The SIP is intended to provide a high level framework for action for all relevant stakeholders (cities, research organisations, industry, SMEs and NGOs). This document sets out

the Commission's priorities and work programme and will influence future smart city funding calls under Horizon 2020 particularly the larger scale 'Lighthouse Projects'.

- 2.4 Manchester is one of 15 European cities selected to take part in a new EU China Smart Cities Forum. The programme was launched on November 21<sup>st</sup> in Beijing and was attended by the Deputy Leader, Cllr Bernard Priest. The programme aims to bring together cities to share leading practice as well as enable business to exploit market opportunities. This latter point is particularly critical given the emerging programme in China to construct 192 smart cities.
- 2.5 BIS is co-ordinating work across government on the smart cities agenda. On October 9<sup>th</sup> Government launched its Smart Cities Initiative. Government's two prime objectives under this agenda are; making UK cities more competitive and attractive places to live and work, as well as helping UK businesses capture an equitable share of the global market for smart city goods and services. In achieving this Government have identified a series of challenges for itself, cities and industry which will need to be addressed. At the heart of this lies the need for cities and industry facilitated by central Government to work in a much closer and collaborative way. As a mechanism for achieving this Government is establishing a high level stakeholder forum. This forum will be jointly chaired by the Minister for Science and Innovation and the Minister for Cities and be made up of representatives from industry and cities themselves. Sir Howard Bernstein has been invited to sit on this Forum. Underpinning this forum is a Smart City Advisory Group, which since its inception in early 2013 has been working with BSI to develop a set of 'smart city' standards and guidelines. This group made up of representatives from industry, cities and the academic sector (including officers from the Council) and has as a result of its first phase of work published an outline manual which acts as a 'road-map' to help organisations move towards smarter practices.

### 3.0 A Smart City Vision for Manchester

- 3.1 Manchester has identified two goals to enable it to continue to compete and secure its place in the global economy. They are **growth** and **reform**. The ability to deliver these two goals lies in the identification and delivery of a specific set of targeted interventions. Whilst it may be said that many cities are seeking to address the same challenges in order to remain competitive (globalisation, finance, urbanisation, infrastructure renewal), very few can be said to have achieved this in a way that brings the interventions required together in an integrated way. An intervention in one area will have a 'knock-on' effect in another. Understanding these synergies and interactions better will equip the city with the right knowledge to enable it to make the right choices. This integrated approach would provide the city with the best chance of achieving accelerated added value as well as avoiding unnecessary duplication of effort and resources.

- 3.2 Under the theme of **growth** two specific areas have been identified as critical to success, these are investments in (a) our infrastructure (transport, energy, water, waste, digital and buildings); and (b) our science and knowledge base (universities, science parks, city labs and innovation centres). Under the theme of **reform** we need to look at investments around; early years, troubled families, health and social wellbeing.
- 3.3 At the same time the global market for smart city solutions is potentially significant. It is estimated that by 2020 this will be \$408 billion. Manchester is well placed to capture a strong share of this market with strengths around design, finance and engineering services which could account for 25% of the total smart cities market. Having the right levers and tools in place to enable us to turn our world leading research strengths into commercial propositions that will generate wealth and jobs and help us retain our place internationally will be critical to success.
- 3.4 Against this background and context a series of consultations and workshops with key stakeholders have been held to develop an overarching draft Vision as follows:

*By 2025 Manchester will be amongst the top 20 smart cities in the world. In achieving this goal we will have harnessed our industry and instinct for innovation to drive growth and reduce dependency. At the heart of this evolution will be the harnessing of data to accelerate the establishment of a knowledge rich and intelligent city that drives agility, confidence and entrepreneurialism.*

*In achieving this we will:*

- equip our businesses to have the ambition and confidence to innovate, progress and flourish and in doing so capture a competitive share of the market place.*
- establish a showcase smart city with resilience and carbon efficiency at its heart*
- empower all our citizens to have access to opportunity to fulfil their potential whilst protecting the most vulnerable.*

#### **4.0 Next Steps**

- 4.1 Over the next 12 months work will be progressed in the following areas:
- Agreement of Vision and development of an associated and underpinning 'Road Map' that sets out in more detail work streams, deliverables, outcomes and milestones.
  - Continued engagement with both national and European bodies as well as the private sector and academic institutions in support of delivering the Vision.
  - Development of funding bids, specifically those to the European Commission under the new Horizon 2020 programme.